

MINUTES OF THE
MARICOPA ASSOCIATION OF GOVERNMENTS
AIR QUALITY TECHNICAL ADVISORY COMMITTEE MEETING

Thursday, August 30, 2001
MAG Office
Phoenix, Arizona

MEMBERS PRESENT

Stephen Cleveland, City of Goodyear, Chairman
Scottsdale: Larry Person
Chandler: Jim Weiss

*Gilbert: Danielle Typinski
Glendale: Doug Kukino
Mesa: Christine Zielonka
Phoenix: Joe Gibbs for Gaye Knight
Tempe: Tom Moore
Citizen Representative: Phil Noplos for Walter Bouchard
*Arizona Lung Association: David Feuerherd
*Salt River Project: Greg Witherspoon
Southwest Gas Corporation: Brian O'Donnell
*Arizona Public Service Company: Scott Davis
Western States Petroleum Association: Victor Dugan for Gina Grey
Regional Public Transportation Authority: Bryan Jungwirth
*Arizona Motor Transport Association: Dave Berry
Maricopa County Farm Bureau: Jeannette Fish
*Arizona Rock Products Association: Samuel Aubrey

*Associated General Contractors: David Martin
*Homebuilders Association of Central Arizona:
Connie Wilhelm-Garcia
American Institute of Architects- Central Arizona:
H. Maynard Blumer
Valley Forward: Peter Allard
University of Arizona - Cooperative Extension:
Monica Pastor
Arizona Department of Transportation: Pat Cupell
Arizona Department of Environmental Quality:
Peter Hyde
Maricopa County Environmental Services
Department: Bob Downing for Jo Crumbaker
Arizona Department of Weights and Measures: Mark Ellery
*Federal Highway Administration: Dennis Mittelstedt
Arizona State University: Judi Nelson
Salt River Pima-Maricopa Indian Community:
Stan Belone for B. Bobby Ramirez
Citizen Representative: David Rueckert
*Phoenix Chamber of Commerce: Ian Calkins

*Those members were neither present nor represented by proxy.

OTHERS PRESENT

Doug Collins, Maricopa Association of Governments
Bill Buck, Arizona Auto Hobbyist Council
Cathy Arthur, Maricopa Association of Governments
Ruey-in Chiou, Maricopa Association of Governments
Dean Giles, Maricopa Association of Governments
Sandra Gilbert, Arizona Department of Transportation
Bryant Powell, City of Apache Junction

Lindy Bauer, Maricopa Association of Governments
Sherri Zendri, Arizona Department of Environmental Quality
Jim Larsen, Intel
Machille Wilke, Tosco Corporation
Roger Roy, Maricopa Association of Governments
Steve Ochs, Maricopa Association of Governments
Taejoo Shin, Maricopa Association of Governments
Kale Walch, Pinal County Air Quality Control District
Heidi Koopman, Greater Phoenix Chamber of Commerce

1. Call to Order

A meeting of the MAG Air Quality Technical Advisory Committee was conducted on August 30, 2001. Stephen Cleveland, City of Goodyear, Chairman, called the meeting to order at 1:30 p.m.

2. Approval of the July 5, 2001 Meeting Minutes

The Committee reviewed the minutes from the July 5, 2001 meeting. Maynard Blumer, American Institute of Architects, moved, and Bryan Jungwirth, Regional Public Transportation Authority, seconded, and the motion to approve the July 5, 2001 meeting minutes carried unanimously.

3. Tier 2 and 3 Nonroad Engine Equipment and Ultra Low Sulfur Diesel Fuel

Sherry Zendri, Arizona Department of Environmental Quality, discussed the availability of Tier 2 and 3 nonroad engine equipment and the ultra low sulfur diesel fuel. Ms. Zendri distributed handouts describing H.B. 2538 which included provisions for the voluntary accelerated purchase of Tier 2 and 3 nonroad engine equipment and voluntary implementation of ultra low sulfur diesel fuel, a list of manufacturers of Tier 2 and Tier 3 nonroad diesel engines and equipment, and a list of manufacturers, distributors, and sellers of ultra low sulfur diesel fuel and retrofit equipment.

Ms. Zendri explained that both implement recommendations from the Governor's Brown Cloud Summit Report. She mentioned that the Arizona Department of Environmental Quality (ADEQ) is creating a website that will provide information on the availability of Tier 2 or Tier 3 nonroad equipment, the purchase of nonroad equipment by any person or entity as well as estimates of pollution reduced and the impact on visibility. In addition, information on manufacturers, distributors, and sellers of ultra low sulfur diesel fuel and equipment for retrofitting diesel vehicles with oxidation catalysts and particulate filters will be made available by ADEQ as well as estimates of pollution reduced and the impact on visibility. Ms. Zendri also indicated that ultra low sulfur diesel fuel was not yet available.

Joe Gibbs, City of Phoenix, asked if the accelerated purchase of equipment occurs now, would ultra low sulfur be available by 2006. Victor Dugan, Western States Petroleum Association, indicated that ultra low sulfur diesel fuel will be available in 2006 by four refiners. Monica Pastor, University of Arizona - Cooperative Extension, questioned why the State Legislature would want names on the website. Ms. Zendri responded that she did not know. Larry Person, City of Scottsdale, questioned if ADEQ would provide visibility data on the website. Ms. Zendri indicated that this is consistent with the statute. Mr. Cleveland indicated that ADEQ is seeking input to improve on the data and how it will be presented.

Brian O'Donnell, Southwest Gas Corporation, inquired about the difference between Tier 2 and Tier 3. Mr. Dugan responded that the difference between Tier 2 and Tier 3 standards is a further reduction in motor vehicle emissions. The sulfur content in the ultra low sulfur diesel would not exceed 15 parts per million. Mr. Gibbs ask if the 15 parts per million is not fungible. Mr. Dugan replied that low sulfur diesel fuel would be supplied in small volumes initially and that it would cost

five cents a gallon to truck it in. He indicated suppliers are available and perhaps only special fuel tanks to separate fuels would be required.

4. MAG Fiscal Year 2002 Unified Planning Work Program and Annual Budget

Lindy Bauer, Maricopa Association of Governments, provided an overview of the Air Quality Elements in the MAG FY 2002 Unified Planning Work Program and Annual Budget. Ms. Bauer indicated that the review of the Work Program with MAG Committees would be a new practice and that for future Work Program development, a draft would be provided for Committee input. The FY 2002 Work Program lists the goals and objectives of the Air Quality Elements. A copy of the presentation and the Tentative MAG Air Quality Project Schedule were distributed to members of the Committee. Ms. Bauer covered several air quality activities, including: Carbon Monoxide Maintenance Plan; CMAQ project evaluation; conformity analyses; Ozone Maintenance Plan for the 1-Hour Standard; PM-10 Street Sweeper Projects; PM-10 Street Sweeper Study; the Vehicle Miles of Travel Report; and the Visibility Modeling System.

Ms. Bauer indicated there were many air quality issues that MAG is monitoring. These issues included: a potential lawsuit on the Revised 1999 Serious Area Particulate Plan for PM-10; emissions banking; changes in emission inventories; Ozone Plan, designation, guidance for 8-hour ozone standard; Regional Haze Plan; visibility index; reauthorization of the Transportation Equity Act for the 21st Century (TEA-21); new Environmental Protection Agency (EPA) emissions model (MOBILE6); new Arizona Department of Economic Security population projections based on the 2000 Census; ongoing enhancements to the MAG travel demand models; new highway and transit projects in the transportation improvement program and long-range transportation plan; and scheduling of freeway projects.

Mr. Dugan inquired if the Carbon Monoxide Maintenance Plan and the Ozone Maintenance Plan include the use of ethanol. Ms. Bauer indicated the Carbon Monoxide Maintenance Plan is based on the Serious Area Plan measures, which include the current winter fuel with ethanol. Mr. O'Donnell questioned if changes to the modeling would occur due to the 8-hour ozone standard. Ms. Bauer responded the modeling for the 8-hour ozone standard has not been done and that no changes have been made pending the outcome of EPA guidance and the designation of a nonattainment area. To date, MAG has been working on the 1-hour ozone standard Maintenance Plan. Mr. Gibbs asked if MAG had started on the PM-10 Street Sweeper Study. Doug Collins, Maricopa Association of Governments, replied that he has started on the Study. He mentioned that approximately twelve cities had provided information on street sweepers. In addition, information supplied by the South Coast Air Quality Management District had been very helpful in the early phases of the Study. To date, the evaluation has included about eight certified sweepers; altogether about 40 sweepers are represented from survey responses. Mr. Gibbs asked if there was a good mix of sweepers, for example, regenerative air, vacuum, mechanical, or dustless. Mr. Collins responded that the make up has included a fairly even mix of both regenerative and vacuum street sweepers.

Mr. Jungwirth inquired if the operation of street sweepers were more cost-effective on freeways and if the Arizona Department of Transportation (ADOT) has funding for the purchase of street sweepers. Ms. Bauer responded that ADOT has been encouraged to use discretionary funds for the

purchase of street sweepers. She mentioned freeway sweeping is an area that needs more attention given that some monitors are located near freeways.

Peter Hyde, Arizona Department of Environmental Quality, commented that in regards to MOBILE6, it is premature to predict the effect of oxygenated fuels during the winter season. He indicated that the earlier models over-estimated the vehicular emissions reductions. He indicated that new models will predict a much lower base case emissions in the future calling into question the cost-effectiveness of oxygenated fuels. Ms. Bauer indicated that MOBILE6 also lowered the impact of other measures too and also may limit local data inputs.

Tom Moore, City of Tempe, thanked Ms. Bauer for the presentation and project schedule. He indicated that the CMAQ methodology should be discussed early next year and indicated he is supportive of a workshop to review the CMAQ Methodology. Ms. Bauer affirmed the need for the workshop. Maynard Blumer, American Institute of Architects, indicated that there was a lot of bare land out there and the state highway agency should be an agency within MAG. Ms. Bauer mentioned that ADOT works with local jurisdictions on vegetation and noise walls and is represented on MAG committees. Two ADOT Board members are on the MAG Regional Council.

Mr. Cleveland mentioned that on this past Tuesday, he presented points to the MAG Transportation Review Committee on project emphasis areas. He mentioned that this set the stage for additional street sweeper efforts in the region to replace the entire fleet in ten years. An emphasis is being placed on the paving of shoulders and the paving of unpaved roads in Maricopa County and for the jurisdictions to capture fugitive dust. Mr. Cleveland added that conformity analysis is gradually becoming a part of our daily efforts. He mentioned the importance of taking the MAG Work Program back to the individual governing boards to explain the air quality programs.

5. Development of a MAG Visibility Modeling System

Ruey-in Chiou, Maricopa Association of Governments, presented information on the development of a MAG Visibility Modeling System. Ms. Chiou briefed the Committee that the consultant study team is comprised of ENVIRON International and the University of California-Riverside College of Engineering - Center for Environmental Research and Technology as subcontractor. The consultant contract, with a budget not to exceed \$74,931 was approved by the MAG Regional Council on July 25, 2001. Ms. Chiou outlined the tasks to be performed by the consultant to produce the required analyses and deliverables. Principal work products include a revised scope of work (if appropriate), identify and evaluate models in a working paper, prepare a visibility modeling protocol, and, a database transfer which involves all computer data, programs, and utilities, and staff training and orientation. Completion of the project is scheduled for March 1, 2002.

Mr. Gibbs indicated the assumptions used in the Governor's Brown Cloud Summit for estimating visibility worked well and asked how new models would be an improvement. Ms. Chiou responded that the project would include more complicated modeling using a three dimensional grid system that will include an estimation of particulate matter chemistries in the atmosphere and include post processors to establish a visibility index. Mr. Gibbs asked if there would be a coordinated effort among agencies in the project. Ms. Chiou indicated that as always, MAG would work hand-in-hand

with ADEQ, Maricopa County, and ADOT who were also members of the proposal evaluation team for the project.

Mr. Moore questioned if the deliverables would be in the public domain, especially given the professional judgment, level of uncertainties and complication of the models. Ms. Chiou replied that models will be selected from those available in the public domain or on the EPA website. Mr. Dugan mentioned he was supportive of the approach outlined by MAG staff. He indicated he had concerns with the approach used for the Brown Cloud report; that it was fundamentally flawed and very complicated. Mr. Hyde mentioned MAG should have some kudos. However, he noted that applying these types of models are on the cutting edge, and this project would only be the first step among many to evaluate control measures. He added that there will likely be a lot of refining and caution should be contained in the report. Mr. Blumer asked if this had been done before. Mr. Hyde indicated that it had been done on an experimental basis, however the science is complex when modeling gas particle interactions. He added that ENVIRON is a well-known firm. Mr. Dugan asked if the Environmental Protection Agency had been tapped for funding this project. Ms. Bauer indicated that the project has received MAG Regional Council approval and is being funded with federal monies. However if additional study is warranted, MAG could explore different funding sources.

6. Status of the Revised Serious Area Particulate Plan for PM-10 and Other Planning Activities

Ms. Bauer briefed the Committee on the status of the Revised Serious Area Particulate Plan for PM-10. She reported that the Environmental Protection Agency has developed a schedule to approve the Revised MAG 1999 Serious Area Particulate Plan for PM-10. On September 14, 2001, EPA intends to propose approval of the 24-hour standard portion of the plan and then issue final approval of the entire plan on January 14, 2002.

Mr. Gibbs asked if the Federal Implementation Plan (FIP) would be removed as a result of the Plan approval. Ms. Bauer replied that since the Serious Area Plan addresses measures in the moderate area FIP, it could result in the FIP being removed.

7. Emphasis Areas for Potential Congestion Mitigation Air Quality Funds

Cathy Arthur, Maricopa Association of Governments, presented the Emphasis Areas for Potential Congestion Mitigation and Air Quality funds. Ms. Arthur noted that Mr. Cleveland and herself had presented this information to members of the MAG Transportation Review Committee. She indicated that determining conformity in 2002 will be especially challenging. Ms. Arthur presented a chart projecting a 12 metric ton per day shortfall of PM-10 emissions from onroad mobile sources in 2025. She explained several uncertainties including the Arizona Department of Economic Security (DES) population projections for Maricopa County. The new projections would be based on the 2000 Census and could be up to 20 percent higher in 2025 than previous projections. It is anticipated that the MAG Regional Council may approve the DES interim population projections in July 2002. Additional projects to reduce PM-10 are required for next year's air quality analysis of the Transportation Improvement Program and Long Range Transportation Plan so that estimated emissions will be below the PM-10 motor vehicle emissions budget. These candidate projects

include: the paving of ten miles of unpaved roads with traffic volumes between 100 and 150 average daily traffic each year beginning in FY 2007; and, the replacement of all conventional street sweepers with PM-10 efficient units by 2010 - 48 additional replacement units required in FY 2007-2010. Projects to address the uncertainties include the purchase of PM-10 efficient street sweepers to increase the frequency of sweeping and to pave unpaved shoulders and access points on existing roads.

Ms. Arthur also provided an overview of the project selection process for FY 2007 federally-funded projects and mentioned that the evaluation of Congestion Mitigation and Air Quality projects would begin on September 12, 2001.

Mr. O'Donnell inquired what percentage of PM-10 is from mobile sources. Ms. Arthur responded that mobile sources represented nearly 50 percent of the total in 2006. Mr. Moore asked why current population and vehicle miles of travel were not reflected in the Serious Area PM-10 Plan. Ms. Arthur indicated that at the time the Serious Area PM-10 Plan was submitted, the most recent population data based on the 1995 Special Census and approved by the MAG Regional Council was used. Now, the population projections are being updated to reflect new data from 2000 Census.

Mr. Cleveland indicated that the graph presented by Ms. Arthur was well done and that it should be described on paper to understand the underlying assumptions. He called for Mr. Moore and Ms. Arthur to collaborate on the paper. Mr. Cleveland expressed that the dialogue during the discussion of this issue is the kind he would like to see at the Committee meetings. Christine Zielonka, City of Mesa, questioned the timing of identifying these projects since cities may be taken off guard. Ms. Arthur indicated that the region has committed to pave unpaved roads with average daily traffic greater than 150 by the year 2004. Now it is important to pave unpaved roads with average daily traffic range greater than 100. Mr. Gibbs asked how the information was received by members of the MAG Transportation Review Committee. Ms. Arthur responded that the TRC responded favorably. Mr. Moore commented that the paving of unpaved roads induced travel demand and perhaps other strategies like transit and bikeways should be implemented. Mr. Dugan asked about the composition of the PM-10 motor vehicle emissions budget. Ms. Arthur replied that the budget consists of about five percent vehicle exhaust.

Ms. Zielonka informed the Committee about a pilot project to evaluate the performance of diesel particulate filters and oxidation catalysts. She mentioned that the project would have four phases: phase one would involve technical experts, private industry members, preparation of the scope of the program including expected impacts, cost, and final plan preparation; phase two would include the purchase of the diesel particulate filters; phase three would involve temporary fueling stations for low sulfur fuel; and, phase four would evaluate the operational performance over a one-year period. Ms. Zielonka indicated that if the project is selected for FY 2007 funding, the sponsors hope to accelerate the project in the TIP. The cost of the project is estimated at \$300,000. Mr. Moore also mentioned that information about the project would be placed on the ADEQ website and disseminated to the cities as well. In addition, he mentioned that a reduction in particulates and nitrogen oxides would occur.

Mr. Gibbs asked about the mandatory projects, particularly regarding the meaning of paving. He indicated that the City of Phoenix does not “pave” its alleys, but uses a fast chip seal treatment. Mr. Cleveland indicated that it is important for various cities to share techniques. Doug Kukino, City of Glendale, inquired if CMAQ funds could be used to pave private roads. Mr. Kukino indicated that the City of Glendale was also paving alleys. Mr. Cleveland indicated that sharing of costs on paving private roads will be looked into.

Mr. O’Donnell asked what measures in the chart resulted in the most reductions of PM-10 mobile source emissions. Ms. Arthur responded that reentrained dust represents 40 metric tons out of approximately 60 total metric tons; so measures to reduce reentrained dust are important. Mr. Cleveland expressed his appreciation for the dialogue and the staff preparedness. Again, he called on Mr. Moore to assist Ms. Arthur in writing a description of the chart.

8. Call to the Public

An opportunity was provided to members of the public to address the MAG Air Quality Technical Advisory Committee. No comments were presented.

9. Call for Future Agenda Items

Mr. Cleveland announced that for the next meeting, the Committee would consider the Air Quality Evaluation of Congestion Mitigation and Air Quality projects. Mr. Blumer requested an item on auto emissions testing. Mr. Moore asked that the Federal Highway Administration provide an overview of the intent of CMAQ funds. With no further business, the meeting was adjourned.